

666220-04208260

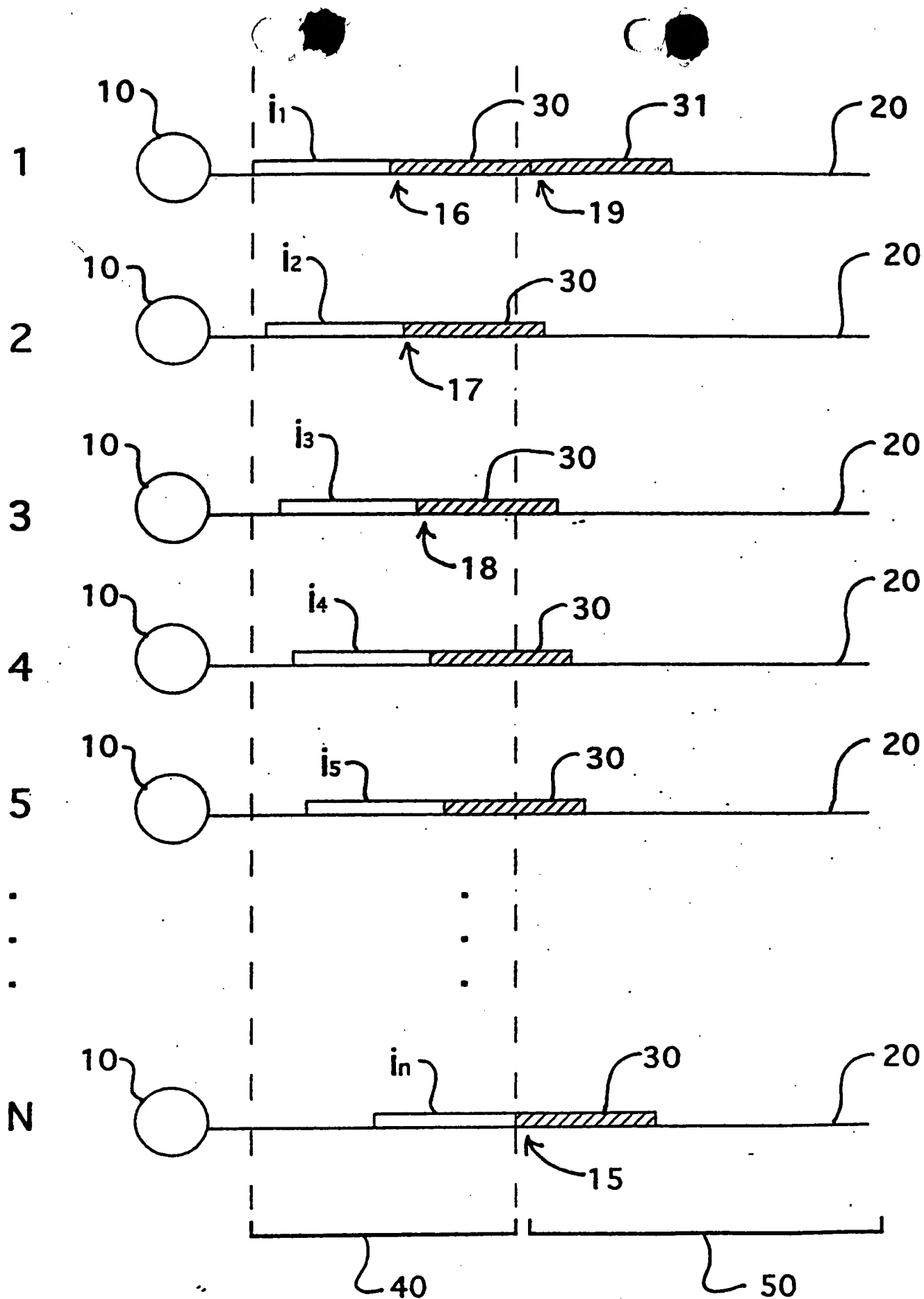


Fig. 1

The diagram illustrates a sequencing cycle. It starts with a DNA template (20) having a primer (200) attached to a bead (10). The primer has 3' and 5' ends and a phosphate group (p). An arrow labeled "anneal/ligate (204)" points to the next step. In this step, a dideoxynucleotide (202) is added. The dideoxynucleotide has a 3' end, a hydroxyl group (HO), a shaded box representing the base, and a phosphate group (OP(=O)(O-)NH-Bt*). An arrow labeled "identify/hydrolyze (206)" points to the next step. In this step, the dideoxynucleotide is identified and hydrolyzed, leaving a gap in the DNA sequence. An arrow labeled "repeat (208)" points back to the start of the cycle.

Fig. 2

The diagram illustrates a sequencing cycle with four main steps:

- anneal/ligate (304):** A primer (300) with a 5' end and a 3' end (labeled OH) is annealed to a template (20). The primer is attached to a bead (10).
- identify/hydrolyze w/RNase H (308):** A fluorescently labeled nucleotide (302) with a 5' end and a 3' end (labeled OP(=O)(O-)O-RRRR-Bt*) is added. The nucleotide is attached to a bead (10).
- cap via polymerase extension (310):** The nucleotide (302) is extended from the primer (300) on the template (20). The extension is labeled with a fluorescent tag (312) and a blocking group (RR-OH).
- repeat (314):** The cycle is repeated for the next base.

Fig. 3a

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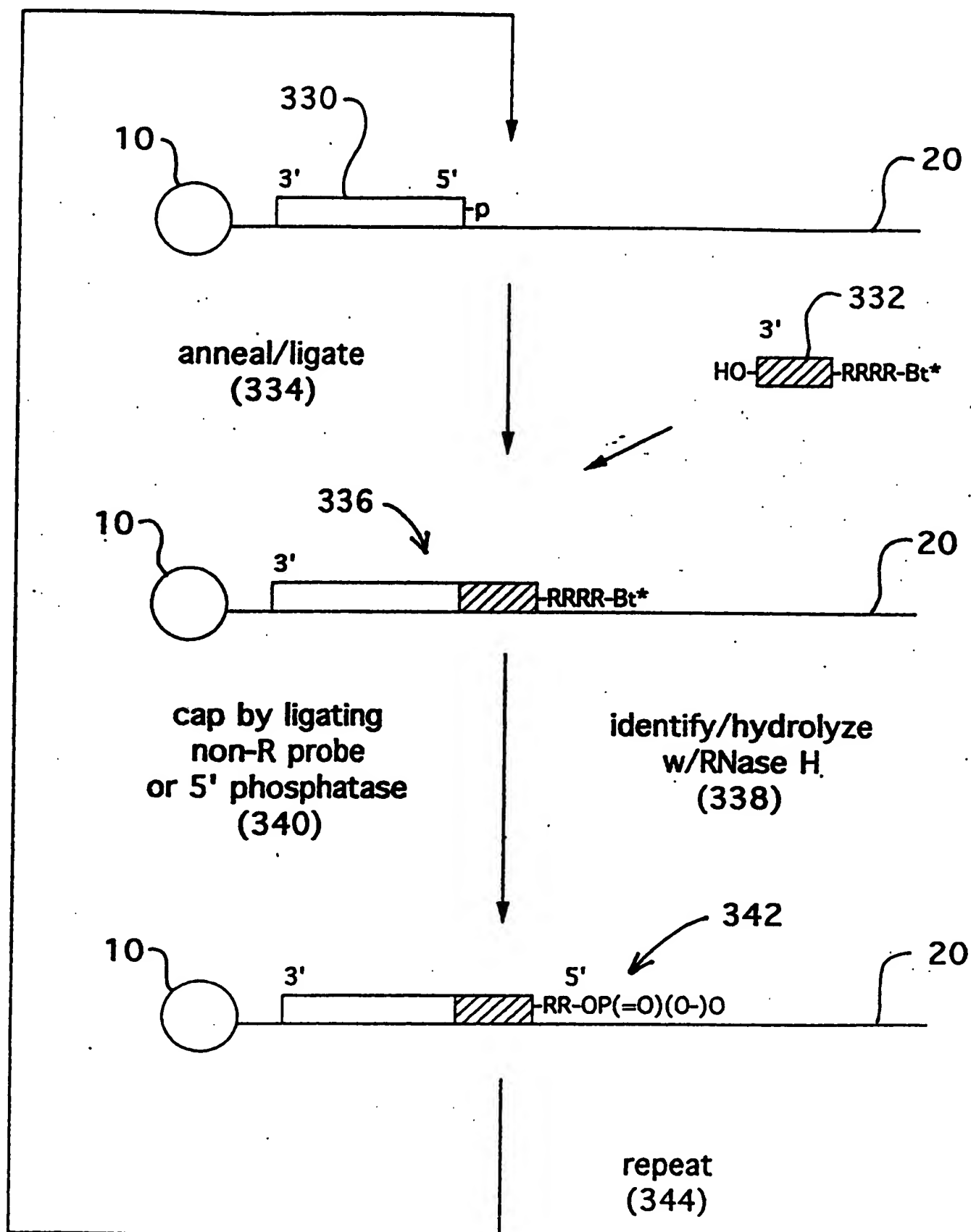


Fig. 3b

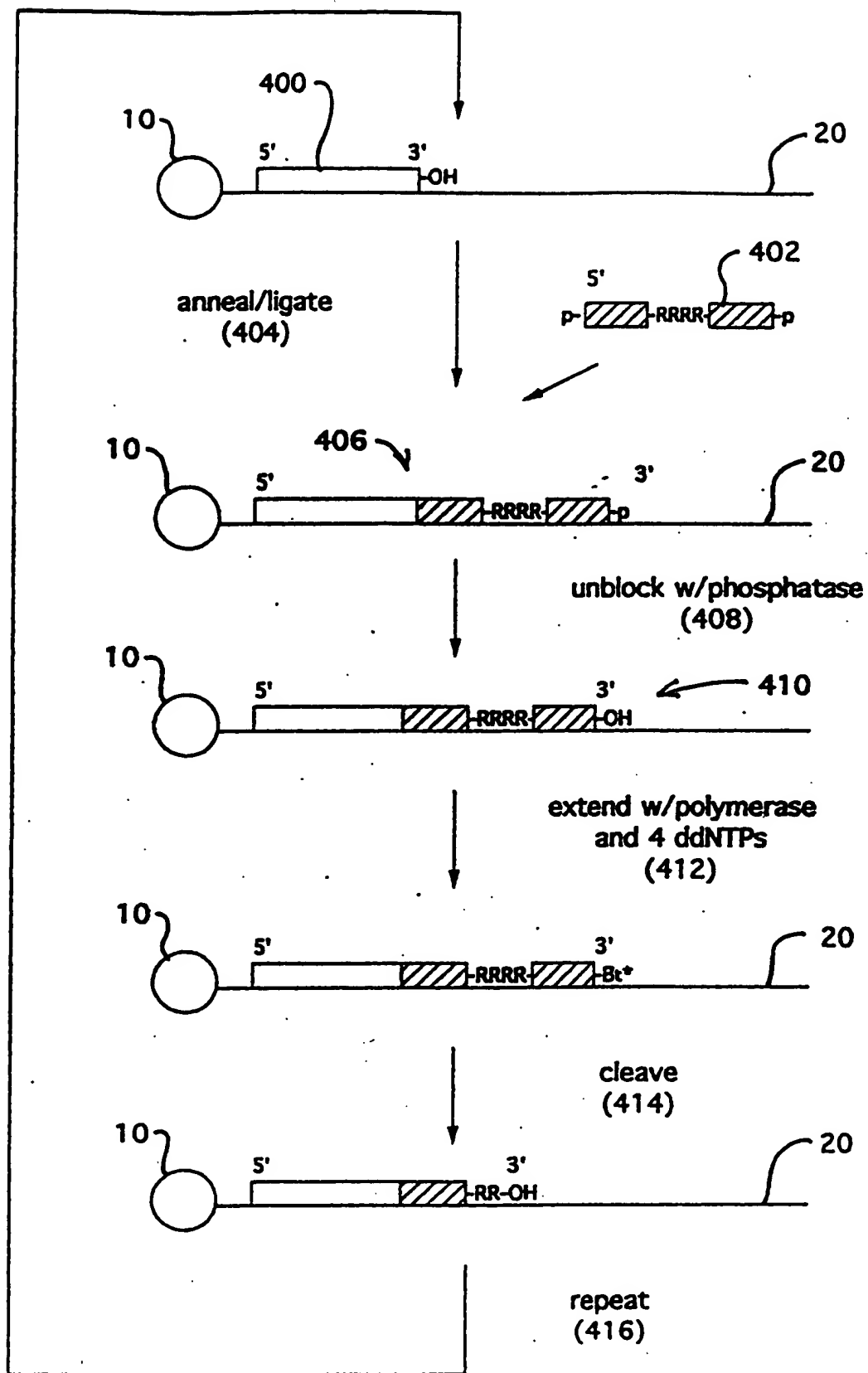


Fig. 4